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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,555	11/20/2001	Yuji Aburakawa	216353US2	8872

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EXAMINER	
LI, SHI K	

ART UNIT	PAPER NUMBER
2633	

DATE MAILED: 01/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/988,555	ABURAKAWA ET AL.	
	Examiner	Art Unit	
	Shi K. Li	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 November 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-68,70 and 71* is/are pending in the application.

4a) Of the above claim(s) *1-41,44-60 and 63-66* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *42,43,61,62,67,68,70 and 71* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 42-43, 61-62, 67-68 and 70-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willebrand et al. (U.S. Patent 6,763,195 B1) in view of Walker et al. (U.S. Patent 5,659,883).

Regarding claims 42, 61, 67 and 70, Willebrand et al. discloses in FIG. 3 a communication system for transmitting information from a master station to a slave station. Willebrand et al. teaches in col. 5, lines 22-30 that the communication system operates in either an active mode or a standby mode. In the active mode, the master transceiver interface unit (TIU) divides information signal into a first signal part (control and status information) for the radio frequency transceiver and a second signal part (data) for the optical transceiver. In the standby mode, the RF channel acts as a protection for the optical channel. Willebrand et al. also teaches an optical receiving part at the slave station for receiving the optical signal from the master station, a radio receiving part at the slave station for receiving the radio signal from the master station and a slave transceiver interface unit for combining the signals from the optical receiving part and the radio receiving part. Willebrand et al. teaches that the signal at I/O 32 is an RF signal. That is, Willebrand suggests a radio signal modulation means for modulating signal to a radio frequency spectral range. The difference between Willebrand et al. and the

claimed invention is that Willebrand et al. does not teach diversity combining information signal in standby mode.

Walker et al. teaches in FIG. 2 that in a hybrid RF/optical link, when either the RF channel or the optical channel has unacceptable error rate, it is desirable to send copies of signal via both the RF and optical channels, and determine and choose the best or correct signal out of the two received copies. One of ordinary skill in the art would have been motivated to combine the teaching of Walker et al. with the communication system of Willebrand et al. such that in standby mode, copies of information signal are sent via both the RF and optical channels, and determination is made to choose the best or correct signal out of the two received copies because there are situations when the optical channel has lower error rate than the RF channel, and vise versa. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to send copies of signal via both the RF and optical channel, and determine and choose the best or correct signal out of the two received copies, as taught by Walker et al., in the communication system of Willebrand et al. during standby mode because the method of Walker et al. covers both situations when the optical channel has lower error rate than the RF channel and when the RF channel has lower error rate than the optical signal.

Regarding claims 43, 62, 68 and 71, Willebrand et al. teaches that the system is switched from active mode to standby mode when the transmission condition is degraded.

Response to Arguments

3. Applicant's arguments filed 9 November 2005 have been fully considered but they are not persuasive.

The Applicant argues that Willebrand does not disclose or suggest when a first transmission mode is selected, an information signal is divided into two different signals being transmitted via a radio path and an optical path, respectively; and, when the second transmission mode is selected, the information signal being transmitted via a plurality of routes, as recited in Applicants' amended claim 42. Further, Walker does not remedy the deficiencies. The Examiner disagrees. As stated above in the rejection, Willebrand et al. teaches in col. 5, lines 22-30 that the communication system operates in either an active mode (first transmission mode) or a standby mode (second transmission mode). In the active mode, the master transceiver interface unit (TIU) divides information signal into a first signal part (control and status information) for the radio frequency transceiver and a second signal part (data) for the optical transceiver. In the standby mode, the RF channel acts as a protection for the optical channel. The difference between Willebrand et al. and the claimed invention is that Willebrand et al. does not teach diversity combining information signal in standby mode. However, Walker remedies the deficiencies. Walker et al. teaches in FIG. 2 that in a hybrid RF/optical link, when either the RF channel or the optical channel has unacceptable error rate, it is desirable to send copies of signal via both the RF and optical channels, and determine and choose the best or correct signal out of the two received copies. One of ordinary skill in the art would have been motivated to combine the teaching of Walker et al. with the communication system of Willebrand et al. such that in standby mode, copies of information signal are sent via both the RF and optical channels, and determination is made to choose the best or correct signal out of the two received copies because there are situations when the optical channel has lower error rate than the RF channel, and vise versa. Thus it would have been obvious to one of ordinary skill in the art at the time the

invention was made to send copies of signal via both the RF and optical channel, and determine and choose the best or correct signal out of the two received copies, as taught by Walker et al., in the communication system of Willebrand et al. during standby mode because the method of Walker et al. covers both situations when the optical channel has lower error rate than the RF channel and when the RF channel has lower error rate than the optical signal.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 571 272-3031. The examiner can normally be reached on Monday-Friday (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

skl
10 January 2006

JASON CHAN
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